

NOTES ON SOME SIPHONARIIDAE

(CLASS GASTROPODA)

By DAVID McALPINE

The commonest member of the *Siphonariidae* living in the vicinity of Sydney has been known as *Siphonaria scabra* Reeve for many years. Examination of Reeve's description and figure (Conch. Icon., Vol. lx, *Siphonaria*, pl. 1, fig. and sp. 2, March, 1856) shows that this is based on Quoy and Gaimard's *Siphonaria diemenensis*, the differences pointed out by Reeve being merely individual, not geographical, though races may be separated at a later date when very many series are available.

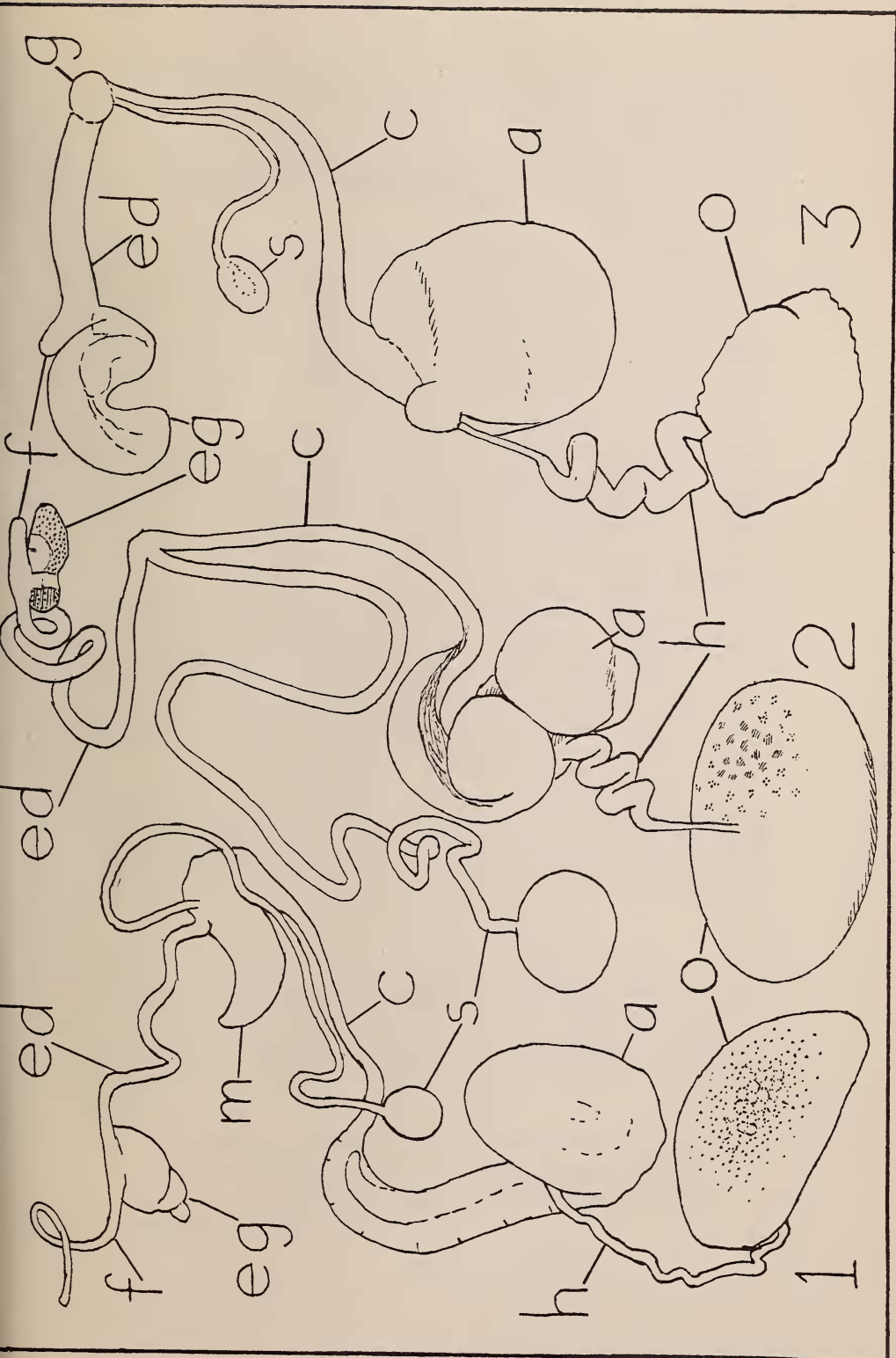
Quoy and Gaimard's species, *Siphonaria denticulata*, was described from Western Port, Victoria (Voy. Astrolabe, Zool., vol. ii, p. 340, pl. 25, figs. 19-20, 1833) and has been confused with *S. diemenensis* Q. and G. (*op. cit.*, p. 327, pl. 25, figs. 1-12, 1833) by some recent authors, but is a very different species. Most Victorian specimens determined as *denticulata* in the Australian Museum collection are not that species at all, but are *diemenensis*. In one case the correct name *diemenensis* has been crossed out and *denticulata* has been substituted. The true *denticulata* appears to be rare in Victoria except perhaps within bays.

Miss E. Pope, of the Australian Museum, has kindly collected many specimens of *Siphonariidae* from the open coast in a number of localities in Victoria, and though always searching for *denticulata*, failed to find it even at Mallacoota in the extreme east of the State. Western Port, the type locality, is much further west, but is not on the open coast. The only Victorian specimens I have seen which agree with the figure of *denticulata* are from Red Bluff, Gippsland, and are specifically identical with the Sydney species erroneously called *scabra* by Hedley and by most workers since. Angas's record of *denticulata* from New South Wales (Proc. Zool. Soc., London, 1867, p. 232) must now be accepted as correct.

Reeve described *S. scabra* as coming from Port Jackson and this localisation probably caused later workers to use his name incorrectly for the commonest species living there (i.e., *denticulata* Quoy and Gaimard, Reeve and Angas, but not of recent authors). The true *scabra*, whose correct name is *diemenensis*, really occurs in Port Jackson, but is quite scarce, and has not previously been recorded under its correct name from this locality, although known as *diemenensis* in Southern Australia.

Iredale introduced a new generic name, *Ellsiphon* (Aust. Zool., vol. ix, pt. 4, p. 437, Dec., 1940) with type (by monotypy) the Queensland *E. marza* Iredale, which I regard as doubtfully distinct from *denticulata*. As it differs anatomically from *Siphonaria* s.str. the species listed by Hedley as *Siphonaria scabra* must bear the name *Ellsiphon denticulatus* Quoy and Gaimard. An account of the features of the genital organs of *Ellsiphon* is given below because of their importance in the classification of this group.

Spermatheca normal, the duct moderately long; epiphallus duct long, slender, terminating in a small gland and rather long flagellum; muscular sac of genital atrium present, but small. The epiphallus seems to separate this genus from Hubendick's section *Sacculosiphonaria*. The shell in that group is said to have reticulate sculpture, while in *Ellsiphon* the sculpture is radial only.



The generic position of *diemenensis* is not so easy to determine. Hubendick (*op. cit.*, p. 58, 1945) gave the sectional name *Ductosiphonaria* to his "Bifurcatagruppe," which included *Siphonaria bifurcata* Rve. and *S. diemenensis* Quoy and Gaimard. An examination of the genitalia of these two species shows that although they have certain similarities they are not closely related. Though the former species was designed as type species, the latter agrees much better with his description of the group. I therefore introduce the new generic name *Hubendickula* with *Siphonaria diemenensis* Q. and G. as type.

The genus *Planesiphon* was described by Iredale (*op. cit.*, p. 437, 1940), but no genotype was given. A few pages later (p. 441) he placed in it the two newly described species *elegans* and *soranus*. Hubendick (*op. cit.*, figs. 44 and 47, 1945) shows the genital system of "*Siphonaria elegans*" differing very greatly from that of *bifurcata*. Iredale's *elegans*, however, closely resembles *bifurcata* conchologically and there is no doubt that the two are congeneric, or possibly only subspecifically separable. Hubendick's *elegans* cannot be the same as Iredale's, but as only the genital system was figured by the former, we do not know to what species it refers.

The International Rules of zoological nomenclature state quite justly that all generic names published after 1930 are to be considered invalid unless a genotype is designated. Under this ruling *Ductosiphonaria* will replace *Planesiphon* for which a genotype has not yet been designated. I designate *Planesiphon elegans* Iredale as type of *Planesiphon* in order to give it a definite position in the synonymy of *Ductosiphonaria*.

The chief characteristics of *Ductosiphonaria* and *Hubendickula* are summarised below.

Ductosiphonaria: Shell rather thin, depressed, sculptured with few, coarse, depressedly rounded ribs, the wide, flat interstices containing up to four or five fine, weak riblets, seldom rivalling the primary ribs in size; coloration pallid, interstitial riblets separated by fine, brown lines or sometimes the whole of the primary interstices blackish; interior greenish buff to light brown centrally, white marginally with small, variable black marks. Animal pale, without dark markings. Cutting points of lateral radula teeth entire. The epiphallus has a short, stout, straight duct with a large, elongate accessory gland and very short flagellum. Genital atrium swollen; spermathecal duct short and very slender, the terminal vesicle very small.

Hubendickula: Shell solid, elevated, sculptured with strong, coarse, rounded, white ribs having narrow, black, unsculptured interstices. Animal usually dark coloured externally. Cutting points of innermost lateral teeth bifid. Epiphallus duct long, curved and looped so that the small accessory gland and short flagellum lie normally against the small genital atrium. Spermathecal duct very long and twisted, terminating in a large vesicle.

SUMMARY OF SYNONYMY

Hubendickula diemensis Quoy and Gaimard + *Siphonaria diemenensis* Quoy and Gaimard and Reeve equals *S. scabra* of Reeve (not of Hedley) equals *Siphonaria denticulata* in Australian Museum collection.

Ellsiphon denticulatus Quoy and Gaimard: *Siphonaria denticulata* Quoy and Gaimard of Reeve, and Angas equals *S. scabra* of Hedley (not Reeve).

ILLUSTRATIONS

1. *Ellsiphon denticulatus* (Q. & G.) Genitalia.
2. *Hubendickula diemenensis* (Q. & G.) Genitalia.
3. *Ductosiphonaria bifurcata* (Reeve) Genitalia.

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